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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,760	11/04/2003	Kenneth C. Widen	M-15290 US	8057
65678 7590 01/30/2008 MACPHERSON KWOK CHEN & HEID, LLP 2033 GATEWAY PLACE SUITE 400 SAN JOSE, CA 95110			EXAMINER NGUYEN, SANG H	
			ART UNIT 2886	PAPER NUMBER
			MAIL DATE 01/30/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/701,760

Applicant(s)

WIDEN, KENNETH C.

Examiner

Sang Nguyen

Art Unit

2886

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 15-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I (claims 1-14 and 27-29) in the reply filed on 11/29/07 is acknowledged.

Applicant should cancel non elected claims 15-26.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106)), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. The practical application of the claimed invention cannot be realized until the information is conveyed to the user. For the results to be tangible, it would need to output to a user, be displayed to a user, stored for later use, or used in any tangible manner. Merely < determining, for the laser beam, a measured value corresponding to the reference; and comparing the measured value with the reference value to obtain the beam quality of the laser beam > would not appear to be sufficient to constitute a

tangible result, since the outcome of the < determining, for the laser beam, a measured value corresponding to the reference; and comparing the measured value with the reference value to obtain the beam quality of the laser beam > step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

Part b. Practical Application the Produces a Useful, Concrete, and Tangible Result under Section IV Determine Whether the Claimed Invention Complies with the Subject Matter Eligibility Requirement of 35 U.S.C. Sec. 101, sentence 3, in the OG Notice from 22 November 2005 states, "In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible, and concrete."

Claims 27-29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are drawn to a computer program per se. A computer program per se are abstract instructions. Therefore, a computer program is not a physical thing (product) nor a process as they are not "acts" being performed. As such, these claims are not directed to one of the statutory categories of invention (See MPEP 2106.01), but are directed to nonstatutory functional descriptive material.

It is noted that computer programs embodied on a computer readable medium or other structure, which would permit the functionality of the program to be realized, would

be directed to a product and be within a statutory category of invention, so long as the computer readable medium is not disclosed as non-statutory subject matter per se (signals or carrier waves).

See OG Notices: 22 November 2005, "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility". MPEP 2106.

Web site <http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-27, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnston et al (U.S. Patent No. 5,078,491).

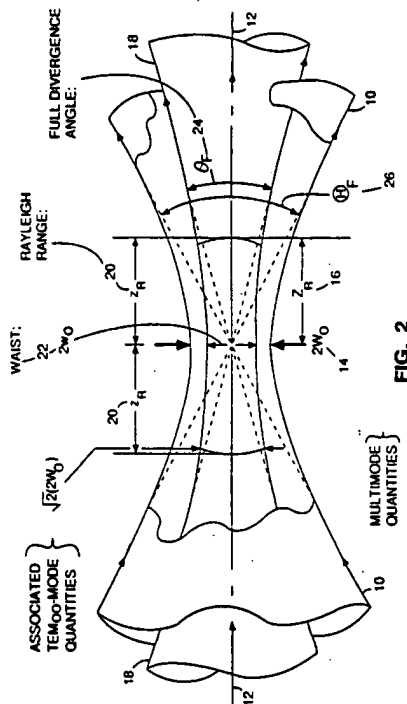
Regarding claims 1 and 27; Johnston et al discloses a method of determining beam quality (BQ) of a laser beam (10 of figure 7a), comprising:

providing a reference value from a theoretical Gaussian laser beam (col.3 lines 67 to col.4 line 25, for example, a fundamental mode beam [18 of figure 2] of Gaussian laser beam mode [10 of figure 2]);

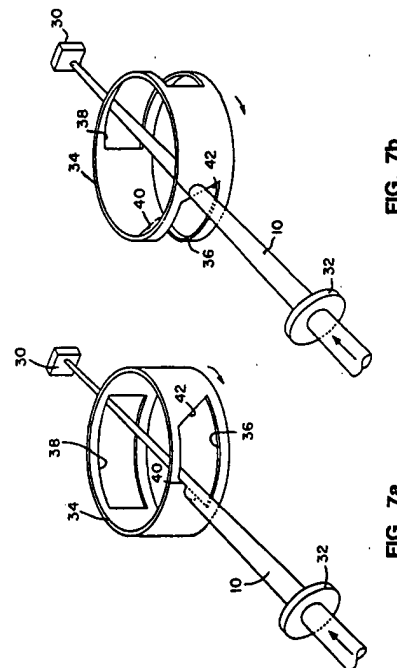
determining, for the laser beam (10 of figure 7a), a measured value corresponding to the reference (18 of figure 2) by a detector (30 of figure 7a); and

comparing the measured value with the reference value to obtain the beam quality of the laser beam by a processor (col.6 lines 20-30, col.8 line 63 to col.9 line 2 col.21 lines 25-39, and col.26 lines 50-58). See figures 1-30

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Regarding claim 3; Johnston et al discloses the measured value is a normalized power received in approximately the same area as the Gaussian beam for the reference value (figures 1-2 and col.1 line 55 to col.2 line 29).

Regarding claim 4; Johnston et al discloses the processor for determining measuring the power from the laser beam (10 of figure 7a) through an opening (36, 38 of figure 7a) having a first diameter corresponding to twice the far-field waist size ω_f of Gaussian laser beam (col.8 lines 44-68 and col.11 line 40 to col.12 line 22).

Regarding claim 5; Johnston et al discloses further comprising normalizing the measured power (figures 1-2 and col.1 line 55 to col.2 line 29).

Regarding claim 6; Johnston et al discloses the normalizing comprises dividing the measured power by a measured power of the laser beam (10 of figures 2 and 15) without an opening.

Regarding claim 7; Johnston et al discloses the processor for determining measuring power from the laser beam (10 of figure 7a) through openings (150, 152, 154, 156 of figure 18) having diameters different than the first diameter; normalizing the measured powers; and determining the measured value from the normalized measured powers (col.29 lines 1-31 and col.32 lines 18-42).

Regarding claim 8; Johnston et al discloses the number of measured powers is at least three (figure 11).

Regarding claim 9; Johnston et al discloses the measured value is measured approximately one focal length away from a transform lens (32 of figure 7a and col.15 line 62 to col.16 line 7 and col.21 lines 43-59).

Regarding claims 10-11; Johnston et al discloses the comparing comprises calculating the square root of the reference value divided by the measured value, wherein the measured value corresponds to twice a square root of the second moment of intensity of the laser beam (col.9 lines 30-40 and col.33 lines 30-56).

Regarding claim 12, 14, and 29; Johnston et al discloses the laser beam can be at least two different types of laser beams (figures 11a-11c and 12a-12d).

Regarding claim 13; Johnston et al discloses the different types of laser beams (figures 2 and 11) comprises Gaussian, top hat, super Gaussian, transverse modes, and combinations of transverse modes (figures 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnston et al (U.S. Patent No. 5,078,491).

Regarding claims 2 and 28; Johnston et al discloses all of features of claimed invention except for the reference value is approximately $1-e^{-2}$. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine method of Johnston et al with the reference value is approximately $1-e^{-2}$, since it has

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been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yazaki et al (7193693, Goden et al (7128737); Rosenfeldt et al (6606158); Cho et al (6549092); Kidd (6044,329); Braunlich et al (5124993); Sasnett et al (5100231) ; or Fujita (4910690).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Nguyen whose telephone number is (571) 272-2425. The examiner can normally be reached on 9:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on (571) 272-2800 ext. 86. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

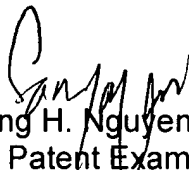
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January 24, 2008


Sang H. Nguyen
Primary Patent Examiner
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